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(71) Applicant
Ferguson Limited

(Incorporated in the United Kingdom)

Cambridge House, 270 Great Cambridge Road, Enfield, Middlesex, EN1 1ND, United Kingdom

(72) Inventor
David William Holliday

(74) Agent and/or Address for Service
Williams Powell & Associates
34 Tavistock Street, London, WC2E 7PB, United Kingdom

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(54) **Selectively connecting a television device to one of a number of peripheral devices**

(57) An increasing number of peripheral devices such as a computer, or satellite aerials, are individually connectable to a television receiver 1 or video recorder 2. Ease of interconnection and control of signal sourcing between the receiver, recorder and many peripheral devices 6-8 using single SCART connectors 3, 4, 9-11, is provided by a unit 5 including electronic switches controlled by coded switching signals from the television receiver or recorder, or a remote control device 15, 17 (which also control the receiver and recorder). The unit may be self powered, or fed from the receiver or recorder. It may be free standing, wall mounted or mountable on or in the receiver.

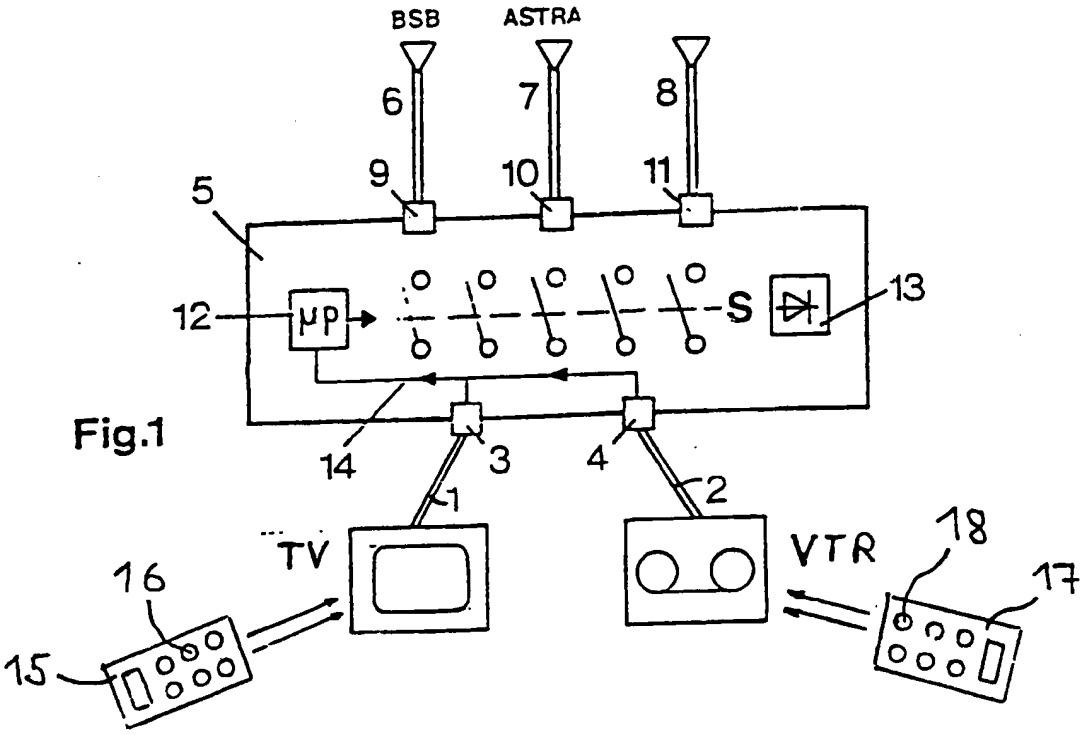

Fig.1

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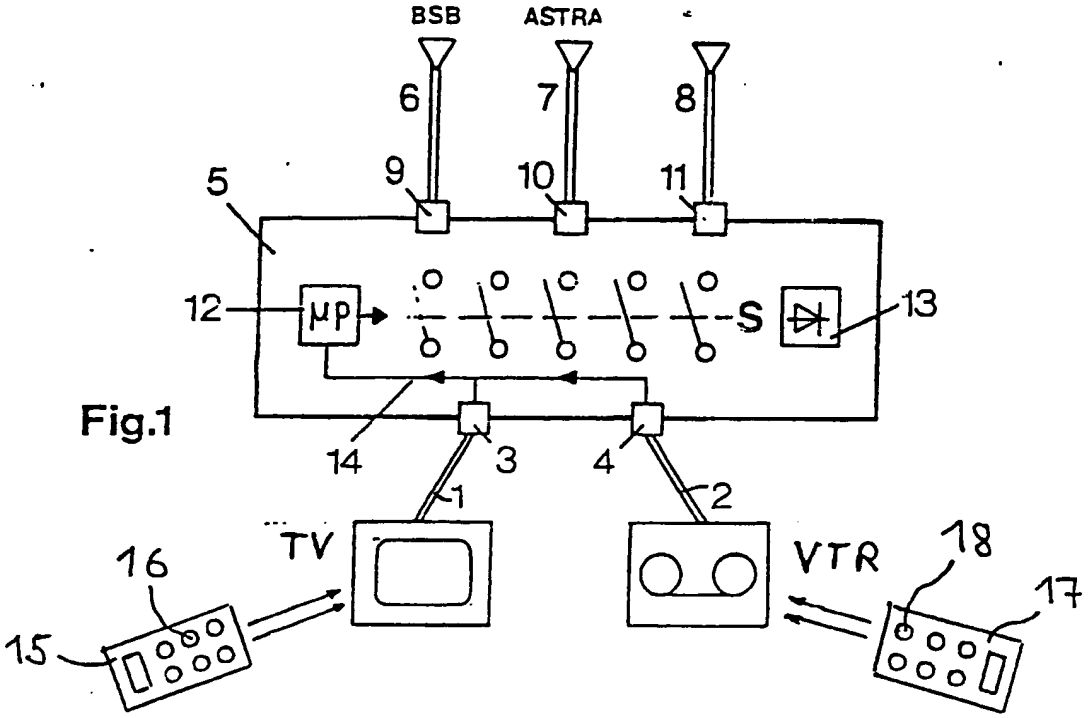

Fig.1

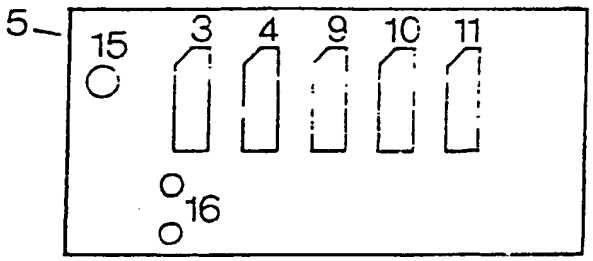

Fig.2

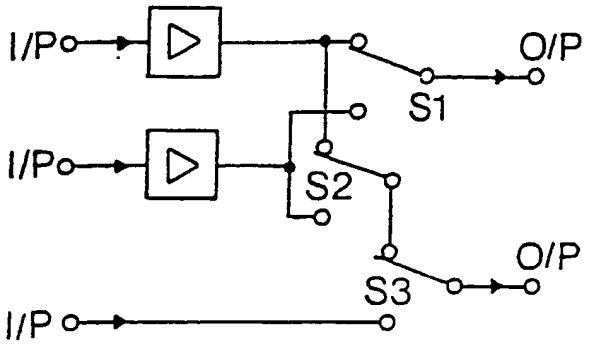

Fig.3

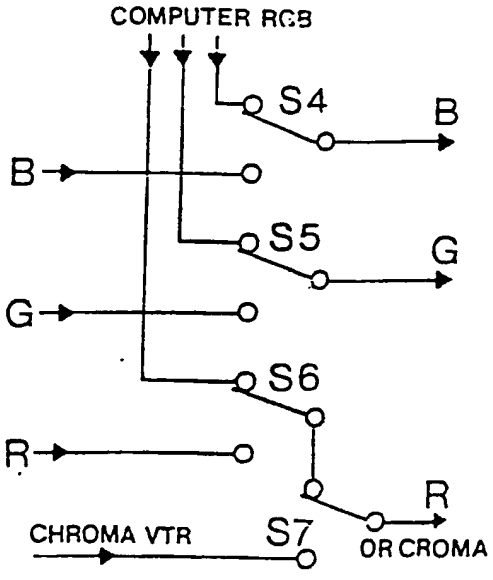

Fig.4

EQUIPMENT INCLUDING A TELEVISION DEVICE AND A NUMBER OF PERIPHERY DEVICES

The present invention relates to an equipment including a television device and a number of periphery devices connected thereto by SCART cables.

Within modern television equipments an increasing number of periphery devices have to be connected to the television receiver or to the video recorder. Said devices or signal sources may be an ASTRA antenna line, a satellite antenne, a computer, a BSB line or an auxiliary line. Said sources may be connected alternatively to the television receiver or the video recorder whereas the television receiver may also be connected to the video recorder. Therefore, there is a requirement for means of connecting a full range of products directly to each other using peritelevision connectors. In practice it may be difficult for persons not skilled in the art to make the necessary connections of SCART cables to the SCART sockets of said devices.

It is an object of the present invention to provide ease of connections and control of signal sourcing between many products using single SCART connectors.

According to the invention there are provided a unit to which said devices are connectable via SCART cables including electronic switches and further means for feeding coded switching signals from the television device via said SCART cable to said unit for individually connecting one of said periphery devices to the television device.

The unit according to the invention constitutes a simple interface needing only one peri socket for each periphery device for signal source. In single peri connector applications it will allow full use of features available without the need to separately remove and reconnect different SCARTs for different applications. It will also cut down on the amount of connecting cables required. The interface allows connec-

tion and selection of peri television connections via a simple interface controlled by the data bus or simple status line from the television receiver and the video recorder. The adaptor will provide buffers to enable viewing and/or recording of programs from satellite, tv, computer or video source and will have an integral power supply and microprocessor to control coded switches. The equipment according to the invention can easily be built up and handled even by persons not skilled in the art.

The invention may for example be a new application of the peri television data bus facility which is part of the CENELEC EN 50.049 specification. The interface will be best connected to and controlled by the television receiver and can be done by using the data signal which can be made available for example on the peri SCART pins 10,12,14. Preferably said coded switching signals are digital signals fed via a data bus from a television device to said unit. The unit may contain an integral power supply. In another form of the invention the operating voltages for said unit are fed from power supply of the television receiver or the video recorder via said SCART cable. The operating voltage may be derived from the stand by power supply of the television receiver. Preferably the unit contains a microprocessor fed with said switching signals for controlling said switches.

The unit according to the invention may be included within the cabinet of the television receiver. The unit may also have the form of a box having means for fastening it to the back cover of the television receiver. The box also may be constructed in such a form that it can be deposited on the ground or fastened to the wall.

Said electronic switches within the unit may be controllable by the remote control of the television

receiver or the video recorder.

In order that the invention may more readily be understood, a description is now given by way of example only, reference being made to the accompanying drawing. The drawing shows in

Figure 1 the unit according to the invention together with periphery devices and sources connected thereto,

Figure 2 the arrangement of the SCART sockets of said unit,

Figure 3 an example for the switches within the unit and

Figure 4 another example for the arrangement of the switches.

In Figure 1 a television receiver TV and a video recorder VTR are connected via SCART cables 1, 2 to SCART sockets 3, 4 of unit 5 which has the form of a small box. Furthermore different periphery devices or signal sources like BSB, a line from an antenna for reception of signals from the satellite ASTRA and a line for auxiliary use are connected via SCART cables 6, 7, 8 to SCART sockets 9, 10, 11 of unit 5. Unit 5 includes a microprocessor 12 and a power supply unit 13. Furthermore a number of switches S is provided. Said switches are arranged in such a way that they can connect television receiver TV and/or video VTR to any one of SCART sockets 9, 10, 11. Furthermore switches S can interconnect television receiver TV and video recorder VTR.

If the operator wants to make the desired connection, for example to connect the television receiver TV to ASTRA socket 10 manipulation is made at the receiver TV or within a remote control unit. Upon this manipulation a digital coded signal generated within television receiver TV can be fed via one lead of SCART cable 1 to

SCART socket 3. This signal is fed to the microprocessor 12 as symbolically indicated by line 14. The microprocessor 14 generates a corresponding switching signal which actuates one or more switches S in such a way that the desired connection between SCART sockets 3 and 10 is performed. Likewise the video recorder TVR can be operated in such a way for making the desired connection.

Figure 2 shows the arrangement of five identical SCART sockets 3, 4, 9, 10, 11 as shown in Figure 1 and the devices or signal sources connectable to said sockets. The unit 5 includes a push button 15 for mains on and an audio output terminal 16.

Figure 3 shows an example for the arrangement of switches S1, S2, S3 enabling the desired connections between signal sources BSB, ASTRA, VTR and devices VTR, TV. By an appropriate actuation of said switches by the microprocessor 12 the desired connections can be made. For example ASTRA line can be connected to television receiver TV via switches S2, S3. Likewise VTR can be connected to TV via switches S1, S2, S3.

Figure 4 shows an arrangement of switches S4, S5, S6. Said switches may connect input signals RGB from a BSB line or from a computer alternatively to RGB inputs of a television receiver. Instead of the signal R a chroma signal from a video recorder in form of a modulated colour carrier can be switched to television receiver TV or from a BSB reveiver to the VTR.

Unit 5 shown may have the form of a small box including SCART sockets, switches, microprocessor and power supply unit. Said box may be integral within the television receiver, the video recorder, or any of the peripheral units. Said box may have means for fastening it to the back cover of the television receiver. The box may also be mounted to the wall like a so-called "distributor cap". Switches shown

may be realized by appropriate integrated circuits. No high switching speed is needed because the switches do not gate signals but only switch between different modes of operation or different sources.

According to a further embodiment of the invention a remote control device is provided cooperating with the television device and/or the video recorder in such a way that said electronic switcher in said unit can be controlled by said remote control device. Such an embodiment is additionally shown in Fig.1. A remote control device 15 is provided for controlling the television receiver TV in a normal way. However, if a button 16 of the device 15 is held down for a longer time of about 10 seconds then the television receiver TV acts upon unit 5 in such a way that switches S connect television receiver to the next of the three sources shown, connected via cables 6,7,8 to unit 5. For example, by holding down button 16 for 10 seconds television receiver TV is switched by switches S from BSB socket 9 to ASTRA socket 10. If button 16 is held down permanently for a time longer than 10 seconds than switches S are actuated automatically for switching socket 3 from one socket to the next. If button 16 is released, switch S stops, automatically switching to a next socket 9, 10, 11 and remains on the socket just selected. In the same way unit 5 can be controlled by remote control device 17 with button 18 designed for normally remote controlling video recorder VTR. Each of a number of remote control devices 15,17 or more for controlling a number of devices can be used for controlling switches S in unit. The remote control devices are arranged in such a way that each button of all buttons of the device can be used for controlling

unit 5 in the way described. The remote control devices 15,17 correspond with television receiver TV and video recorder VTR and further devices via an infrared link.

CLAIMS

1. Equipment including a television device and a number of periphery devices connected thereto by SCART cables, characterized by a unit to which said devices are connectable via SCART cables and including electronic switches and further by means for feeding coded switching signals from the television device via said SCART cable to said unit for individually connecting one of said periphery devices to the television device.

2. Equipment according to Claim 1, characterized in that said coded switching signals are digital signals fed via a data bus from the television device (TV, VTR) to said unit.

3. Equipment according to Claim 1, characterized in that the unit contains an integral power supply.

4. Equipment according to Claim 1, characterized in that operation voltages for said unit are fed from power supply of the television receiver via said SCART cable.

5. Equipment according to Claim 4, characterized in that operating voltages are derived from a standby power supply.

6. Equipment according to Claim 1, characterized in that the unit contains a microprocessor for controlling said switches.

7. Equipment according to Claim 1, characterized in that said unit is included within the housing of the television receiver.

8. Equipment according to Claim 1, characterized in that said electronic switches are controllable by the remote control of the television receiver or the video recorder.

9. Equipment according to Claim 1, characterized in that said electronic switches are mounted on the unit and operated by the user.

10. Equipment according to Claim 1, characterized in that said unit has the form of a box having means for fastening it to the back cover of the television receiver.

11. Equipment according to Claim 1, characterized in that said unit has the form of a free standing box.

12. Equipment according to Claim 1, characterized in that said unit has the form of a wall mounted box.

13. Equipment according to Claim 1, characterized in that said means for feeding coded switching signals include a data bus.

14. Unit for an equipment according to any one of the preceeding claims.

15. Unit as described within the specification and the drawing.

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